CLAIMS

1. A protein comprising the amino acid sequence of SEQ ID NO: 2, SEQ ID NO: 4, or SEQ ID NO: 6, or a protein comprising an amino acid sequence of SEQ ID NO: 2, SEQ ID NO: 4, or SEQ ID NO: 6 in which one or more amino acids are replaced, deleted, added, and/or inserted, and functionally equivalent to the protein comprising the amino acid sequence of SEQ ID NO: 2, SEQ ID NO: 4, or SEQ ID NO: 6.

2. The protein of claim 1, comprising an amino acid sequence selected from the group consisting of SEQ ID NO: 2, SEQ ID NO: 4, and SEQ ID NO: 6.

3. A DNA encoding the protein of claim 1.

4. The DNA of claim 3, comprising a nucleotide sequence selected from the group consisting of SEQ ID NO: 1, SEQ ID NO: 3, and SEQ ID NO: 5.

5. A DNA hybridizing with a DNA comprising a nucleotide sequence selected from the group consisting of SEQ ID NO: 1, SEQ ID NO: 3, and SEQ ID NO: 5 under the stringent condition, and encoding the protein of claim 1 or the protein functionally equivalent thereto.

6. A vector comprising the DNA of any one of claims 3, 4, and 5.

7. A transformed cell expressibly comprising the DNA of any one of claims 3, 4, and 5.

8. A method for producing the protein of claim 1, the method comprising culturing the transformed cell of claim 7 and collecting an expression product of the DNA of any one of claims 3, 4, and 5.

9. An antibody binding to the protein of claim 1.

10. The antibody of claim 9, which recognizes an epitope of a protein comprising an amino acid sequence selected from amino acid sequences of SEQ ID NO: 2, SEQ ID NO: 4, or SEQ ID NO: 6.

11. The antibody of claim 10, wherein the antibody is a monoclonal antibody.

12. An immunoassay method for measuring the protein of claim

2 or its fragment, the method comprising immunologically binding the antibody of any one of claims 10 and 11, to the protein of claim 2 or its fragment.

13. A reagent for an immunoassay for the protein of claim 2 or its fragment, comprising the antibody of any one of claims 10 and 11.

14. A method for detecting mesangial proliferative nephropathy, the method comprising measuring the protein of claim 2 or its fragment contained in biological samples and comparing the measured amount with that obtained from normal samples.

15. A transgenic nonhuman vertebrate, wherein the expression level of the gene encoding MEGSIN is modified.

16. The transgenic nonhuman vertebrate of claim 15, wherein the nonhuman vertebrate is a mouse.

17. The transgenic nonhuman vertebrate of claim 16, which is a knockout mouse wherein expression of the gene encoding MEGSIN is inhibited.